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THE DESIGNATION AND DESCRIPTION OF THE NEOTYPE OF *TIPULA FRATERNA* LOEW (TIPULIDAE: DIPTERA).

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During the course of a taxonomic study of the "*fraterna*" complex, it became necessary to designate a neotype for *Tipula fraterna* Loew. The type of this species was described by Loew in 1864, and the type material has since been reported as lost (Alexander, 1915). Dr. Alexander (personal communication) informed me that the late Dr. Nathan Banks had examined the type material of certain species described by Loew (1864) in an attempt to find the types of *T. fraterna* and others which have also been lost. A letter was sent to the Harvard Museum of Comparative Zoology, where this material is located, asking if Dr. Banks had been successful in locating the insects, particularly *T. fraterna*. Dr. W. C. Brown (personal communication) informed me that he was "unable to find any material among the Tipulidae that is in any way marked

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as related to *T. fraterna* or that one might reasonably take as type material of that species." Since Dr. Alexander and Dr. Banks had examined this material and could find no type which referred to *T. fraterna*, I had to assume that the type of this species was indeed lost.

In selecting the specimen to serve as the neotype, I used my conception of the species and tried to follow as closely as possible that which, in my opinion, Loew had in mind.

Due to the lack of specimens of *T. fraterna* from the type locality at Washington, D. C., a specimen was chosen from among a lot taken in Macon County, North Carolina. This was the region closest to the type locality from which specimens were available to me.

A description of the neotype specimen follows.

Measurements: Wing length, 16.50 mm.; body length, 15.80 mm.

Head: Frontal prolongation of head obscure yellow, nasus long, slender, dorsal surface sparsely pruinose; palpi brown. Antennae, if bent backward, extending slightly beyond base of abdomen; basal segment dark yellowish-brown, second segment concolorous, both segments sparsely pruinose; the first flagellar segment yellow with base vaguely darker. Remainder of flagellar segments bicolorous, nearly black at base with distal portion of each segment yellow, bicolorous condition becoming obscure at distal flagellar segments, gradually becoming more infuscated and darker. Head dark gray pruinose, vertex lighter; head with dark median vitta extending from vertex to occiput.

Thorax: Pronotum brown, mesonotal praescutum brownish-gray with three brown stripes, all indistinctly bordered with darker brown; the median stripe with a dark brown median vitta which becomes obscure before the suture; scutum brownish-gray prui-



Neotype of *T. fraterna*. Left: lobe of ninth tergite. Right: outer dististyle.

nose; scutellum paler yellowish-brown pruinose. Pleura light gray pruinose, slightly darker at propleura, sternopleurite, anterior anepisternum, and episternum. Halteres pale brown with knobs darker. Legs with coxae yellow, faintly black at posterior base; femora brownish-yellow, darkening slightly at distal tips; tibiae darker brownish-yellow; remainder of leg segments becoming darker with terminal segments of tarsi brownish-black. The entire apex of the wing dark brown; the inner end of the stigma yellow, the distal end dark brown; cell M paler; a narrow but conspicuous whitish band transversing wing at or a little before the cord, extending from the stigmal area into cells M_3 and M_4 and the inner end of cell 1st M_2 . Veins dark brown except in area of the whitish band. Basal section of vein R_2 about one-half the length of cell 1st M_2 , the latter relatively long and narrow; petiole of cell M_1 about one-third the length of cell M_1 .

Abdomen: Abdominal tergites pale yellowish brown with broad dark brown sublateral stripes, lateral margins paler; the sublateral stripes vague at the second abdominal segment, darker in first and other segments. Sternites pale yellow-brown anteriorly, becoming dark brown at terminal segments. Hypopygium with caudal margin of ninth tergite bearing a conspicuous, strongly depressed and slightly triangular median lobe, the tip of the lobe bluntly rounded, the sides narrowing to an angle of thirty-nine degrees. The outer dististyle compressed, with vague apico-cephalic and apico-caudal lobes; setae slightly tufted in appearance at apico-caudal edge (see fig.). Ninth sternite with a deep V-shaped notch, the margins fringed with conspicuous elongate setae.

Neotype: Male; Macon County, North Carolina, at Highlands, altitude 3,800 feet, June 11, 1934 (J. S. Rogers, coll. no. 50) (slide no. 684, Hynes). The neotype will be retained in the University of Florida Insect Collection, Gainesville, Florida.

Topotypes: Five males; Macon County, North Carolina, at Highlands, June 11, 1934 (J. S. Rogers, coll. no. 50) (slide no. 6660, J. S. R.). Six males; Macon County, North Carolina, at Highlands, 3,800 feet, June 12, 1934 (J. S. Rogers, coll. no. 58) (slide nos. 6658, 6659, J. S. R.). Topotypes will be deposited in the University of Florida Insect Collection.

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